

DCCA102

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I Semester B.C.A. Degree Examination, April - 2023

COMPUTER APPLICATIONS

Problem Solving Techniques

(NEP Scheme 2021-22 Onwards)

Paper : CA-C2T

Time : 2½ Hours

Maximum Marks : 60

Instructions to Candidates:

Answer any **Four** questions from each part.

PART - A

Answer any **Four** questions. Each question carries 2 marks.

(4×2=8)

1. Mention two methods for analysing the performance of an algorithm.
2. Define variable and constant. Give one example for each.
3. Define Array with an example.
4. Write an algorithm to find the square root of a number.
5. List any two differences between linear search and binary search algorithm.
6. What is two way merging. Explain with an example.

PART - B

Answer any **Four** questions. Each question carries 5 marks.

(4×5=20)

7. Define an algorithm. Mention any 4 characteristics of an algorithm.
8. Explain different forms of If statement with syntax and example.
9. What is a pointer? Explain with an example.
10. Write a program to find GCD of 2 integers.
11. Write an algorithm, to find maximum number in an array of n elements.
12. Write a program to search an element using linear search.

[P.T.O.]





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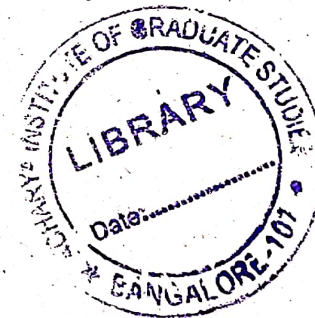
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PART - C

Answer any **Four** questions. Each question carries **8** marks.

(4×8=32)

13. Explain various operators available in C.
14. Explain various forms of looping structures available in C.
15. Explain various operations performed on strings with example for each.
16. Write a program to find the multiplication of two matrices.
17. Explain insertion sort with example.
18. Write Bubble sort algorithm to sort the given set of elements. Trace the Bubble sort algorithm for the following elements, 28, 20, 1, 30, 8, 15, 05.





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I Semester B.C.A. Degree Examination, March/April - 2022

COMPUTER SCIENCE

Problem Solving Techniques Using 'C'

(CBCS Scheme)

Paper : BCA 103T

Time : 3 Hours

Instructions to Candidates:

Answer all Sections.



SECTION - A

I. Answer any ten questions.

(10×2=20)

1. Mention the different datatypes supported in C language.
2. What is software? Mention the classification of software.
3. Give the syntax for do - while loop.
4. What is the difference between break and continue?
5. What is Ternary operator?
6. What are local and global variable?
7. Define array. How can an array be initialized?
8. Define pointer with an example.
9. Mention any four string functions.
10. Give the difference between structure and union.
11. What is file pointer?
12. What are command line arguments?

[P.T.O.]





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SECTION - B

II. Answer any five questions.

(5×10=50)

13. a. Explain the structure of C program with an example. (5)
b. Write an algorithm to find largest of 3 numbers. (5)
 14. a. Explain the types of operators. (5)
b. Draw a flowchart to check whether the given number is odd or even. (5)
 15. a. What is a function? Explain with an example. (5)
b. Write a C program to find GCD of two numbers using recursive function. (5)
 16. a. Explain various if statements. (5)
b. What are formatted I/O functions in C? (5)
 17. a. Explain different storage classes in C language. (5)
b. Write a C function for finding the length of given string. (5)
 18. a. Write a 'C' program to find whether a given number is prime (or) not. (5)
b. Explain switch case in C with an example. (5)
 19. a. Explain different modes of opening a file. (5)
b. Write a note on call by value and call by reference with an example. (5)
 20. a. What are preprocessor directives? (5)
b. Explain static and dynamic memory allocation. (5)
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I Semester B.C.A. Degree Examination, August - 2021

COMPUTER SCIENCE

Problem Solving Techniques Using C
(CBCS Scheme)

14 AUG 2021

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates : Answer ALL Sections.

SECTION - A

I. Answer any Ten questions.

(10×2=20)

- 1) What is software? Mention the classification of software.
- 2) What is type casting?
- 3) Mention any four C tokens.
- 4) What is Ternary operator?
- 5) What are the rules for declaring a variable in C?
- 6) What are local and global variables?
- 7) What is Recursion?
- 8) Define Pointer with an example.
- 9) Distinguish between calloc () and malloc ().
- 10) What are the uses of break and continue statements?
- 11) Define pre - processor directive?
- 12) What is a storage class?

SECTION - B

II. Answer any Five questions.

(5×10=50)

- 13) a) Explain the structure of C program with an example. (5)
b) Write an algorithm to find average of three numbers. (5)
- 14) a) What is a flow chart? Write its symbols. (5)
b) Explain data types in C. (5)
- 15) a) Explain recursive function with an example. (5)
b) Write a 'C' program to find factorial of a number. (5)

[P.T.O.]





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- 16) a) Write a note on formatted I/O functions in C. (5)
b) Explain various If statements. (5)
- 17) a) Write a 'C' program to find whether a given number is prime (or) not. (5)
b) Explain switch - case statement with example. (5)
- 18) a) Explain string handling functions in C. (5)
b) What is an Array? Explain how to access an array element with an example. (5)
- 19) a) Explain types of storage classes. (5)
b) Explain call by value and call by reference. (5)
- 20) a) Explain briefly the various file modes? (5)
b) Write a note on local and global variables? (5)
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